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EXAMINER	
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ART UNIT	PAPER NUMBER
3725	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,258	KELLER, MARIO	
	Examiner	Art Unit	
	PRADEEP C. BATTULA	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-11 and 14-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-11 and 14-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 13, 2009 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1, 2 – 5, 9, 11, 14, 15, and 17 – 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Burchard.

In regards to Claims 1, 14, and 15, Burchard security element comprising a cover layer 4 having gaps 5 in the form of characters (letters) or patterns forming visually and/or machine readable first information (Column 5, Lines 9 – 15, 21 – 25; Figure 7, Items 4, 5), wherein a printed image 8 in the form of letters, numbers or geometrical figures forming visually and/or machine readable second information is disposed within the gaps in register (Column 5, Lines 21 – 25; Figure 7, Item 8 shows letters) and furthermore wherein the security element is a security thread (Column 4, Lines 26 – 29)

and further wherein the content of the second information within the gaps is different from the content first information of the respective gap within which the second information is disposed (Figure 7 shows the first information as the gaps of letters "P" and "L" and Column 5, Lines 21 - 25 teaches of the printing 8 being capable of being inside the first information. However, earlier in the patent in Column 4, Lines 39 – 47 the printing 8 separate from the gaps is taught can have **any** desired color design such as patterns of a flag and this would also have a different content as the first information is just negative writing where the second is positive along with additional information. The flag pattern is a different information than the mere indicia, the printing in the gaps provides an information that is the same but a second information of the flag that is different from the first information where the second information is within the gaps of the first information. Furthermore Column 4, Lines 36 – 47 teach of the same layers and inks as in Column 5, Lines 20 – 24 and the only difference in the embodiments is the location of the printing 8 and therefore the color design can inherently be used in this embodiment), and further wherein the form of the letters, numbers or geometrical figures forming the second information is different from the form of the characters or patterns forming the first information (The physical form of the letters in the second information are different because not only is it a positive image in the first information negative image, but it is also comprised of various different lines or colored portions which shows distinct physical patterns in forming the letters, number or geometrical figures of the second information). Furthermore, with respect to the digital printing, the structure of Burchard is capable of being digitally printed (as discussed later in the office

action); even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In regards to Claim 2, Burchard further discloses wherein the cover layer is opaque at least in partial areas (Column 2, Lines 39 – 43; Column 4, Line 15 – 18).

In regards to Claim 4, Burchard further discloses wherein the cover layer is semitransparent at least in partial areas (Column 1, Lines 7 – 12).

In regards to Claim 5, Burchard further discloses the cover layer is a metallic coating (Column 4, Lines 35 – 38). Although it is not disclosed that the metallic coating of aluminum, gold, copper, iron, nickel and an alloy containing one or more of said metals, the broad description of metallic encompasses such options.

In regards to Claim 9, Burchard further discloses wherein the printed image is finely structured and/or of high resolution (Figure 7, Item 8; The printed ink is very small inside the gap relative to the banknote it is on and therefore finely structured).

In regards to Claim 11, Burchard further discloses wherein the printed image is multicolored or formed of inks with different pigment content (Column 4, Lines 38 – 44)

In regards to Claim 12, Burchard further discloses wherein the printed image forms letters, numbers or geometrical figures (Column 5, Lines 21 – 25).

In regards to Claim 17, Burchard further discloses the security element is on a security paper (Column 2, Lines 33 – 42).

In regards to Claim 18, wherein the security element is present in the form of a thread or band (Column 4, Lines 26 – 29).

In regards to Claim 19, Burchard further discloses wherein the security element is embedded into the security paper as a windowed security thread (Column 4, Lines 26 – 29).

In regards to Claim 20, Burchard further discloses wherein the security element is disposed completely on the surface of the security paper (Column 4, Lines 29 – 34).

In regards to Claim 21, Burchard further discloses wherein the document is a document of value having the security element (Column 4, Lines 26 – 27).

In regards to Claim 22, Burchard further discloses wherein the printed image disposed in the gaps repeats the motif of another printed image of the security paper, such as, for example, a national flag, a denomination, a portrait or an architectural motif (Column 4, Lines 39 – 47 teaches of any color design and national flags for several countries are just color patterns without any other indicia).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Schmitz et al. (Schmitz; U.S. 5,573,639).

In regards to Claim 3, as applied to Claim 1, Burchard does not disclose wherein the cover layer is screened at least in partial areas, said screen being selected from the group consisting of a dot screen, a line screen of and a screen of repeating similar screen elements.

Schmitz discloses a substrate 3 in a security element 2 having a cover layer 4 having a first information in a pattern and having a type of gap also in a pattern (Column 3, Lines 11 – 16, 24 – 26; Figure 1, Items 2, 3; Figure 2, Item 4). Schmitz further discloses machine readable or visual second information 5 with the first and second information being different (Column 3, Lines 26 – 30; Figure 2, Item 5). Schmitz further discloses wherein the cover layer is screened in at least partial areas by a group consisting of a dot screen, line screen, and a screen of repeating similar screen elements (Column 3, Lines 45 – 48). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide with the screening of Schmitz in order to provide shapes and information that is recognizable (Column 3, Lines 48 – 52).

3. Claims 6, 7, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Heim (U.S. 2005/0151368 A1).

In regards to Claims 6, 7, and 27, Burchard does not disclose wherein the cover layer contains a dielectric layer structure that produces different color effects in reflected light upon a change of viewing angle and wherein the dielectric layer structure is

opaque or semitransparent and wherein the security element contains a plastic layer with a surface relief in the form of a diffraction structure embossed there into.

Heim teaches of a security element having a cover layer D and A_2 wherein gaps 9 exist which forms characters wherein the cover layer has a dielectric layer (Paragraph 0064, Lines 1 – 6; [designates "D" as Dielectric]; Figure 8, Items D, A_2 9) provided on a substrate that is provided with a relief structure in the form of a diffraction structure that is embossed there into (Paragraph 0025, Lines 1 – 6; Figure 8, Item S). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the cover layer of Burchard with the cover layer of Heim and modify the substrate and cover layer with diffraction structures as taught by Heim in order to provide the security element of Burchard with a color changing capability (Paragraph 0064, last 5 lines) which provides a further security measure.

In regards to Claim 7, as applied to Claim 6, Burchard modified by Heim further discloses wherein the dielectric layer structure is opaque or semitransparent (Paragraph 0018, Lines 1 – 2; states that the materials are primarily transparent but do not have to be and therefore would be opaque or semi-transparent; Heim).

4. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Kaule et al. (U.S. 6,344,261)

In regards to Claims 10 and 11, as applied to Claim 1, Burchard does not disclose wherein the printed image contains an ink containing pigments selected from the group consisting of luminescent pigments, magnetic pigments, liquid crystal pigments and interference layer pigments.

Kaule et al. discloses of using luminescent substances in multicolor inks that are applied to a security thread (Column 4, Lines 65 – 67 → Column 5, Lines 1 – 6). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the printed image 8 ink with luminescent substances in order to provide a security thread with an additional authentication feature.

5. Claims 1, 2 – 5, 9, 11, 14, 15, and 17 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard.

If Applicant disagrees with the stance of anticipation taken on Claims 1, 14, and 15 due to the embodiments, it is further noted that the layers of the embodiments remain the same as well as the printing. The only difference recited is the location of the printing 8 and areas in which it exists 7 (Column 4, Lines 36 – 47 and Column 5, Lines 21 - 25). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the color printing methods as taught by Column 4, Lines 39 – 37 and Figure 2 to the embodiment of Column 5, Lines 21 – 25 and Figure 7 in order to provide a higher resistance to forgery as well as greater aesthetic quality (Column 4, Lines 55 – 63).

With respect to Claims 2-5, 9, 11, 14, 15, and 17-22 as shown in the 35 USC 102b rejection, those claims are also rejected under 35 USC 103a.

6. Claims 1, 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Burchard.

Heim discloses of a security element for a document of value (Paragraph 0047, Lines 1 – 2) having a cover layer D and A_2 wherein gaps 9 exist which forms characters and patterns [each character can be considered a different information; gaps is first information] wherein the cover layer has a dielectric layer (Paragraph 0064, Lines 1 – 6; Paragraph 0063, Lines 1 – 3 [designates "D" as Dielectric]; Figure 8, Items D, A_2 9) wherein the security element further discloses a plastic layer with a surface relief 8 in the form of a diffraction structure embossed there into (Paragraph 0025, Lines 1 – 3; Paragraphs 0057 – 0059; Figure 5, item 8) and exists separate from a security thread and can exists as a label (Paragraph 0047, Lines 1 – 5; Figure 5, Item 2; Paragraph 0042; Paragraph 0045; Paragraph 0064, Lines 12 – 17).

Heim does not disclose wherein a printed image forming visually and or machine readable second information in the form of letters, numbers or geometrical figures is disposed in the gaps, in register and different in content from the information represented by the gaps, and further wherein the form of the letters, numbers or geometrical figures forming the second information is different from the form of the characters or patterns forming the first information. Heim further does not disclose the second information is digitally printed.

In regards to Claims 1, 14, and 15, Burchard security element comprising a cover layer 4 having gaps 5 in the form of characters (letters) or patterns forming visually and/or machine readable first information (Column 5, Lines 9 – 15, 21 – 25; Figure 7, Items 4, 5), wherein a printed image 8 in the form of letters, numbers or geometrical figures forming visually and/or machine readable second information is disposed within

the gaps in register (Column 5, Lines 21 – 25; Figure 7, Item 8 shows letters) and furthermore wherein the security element is a security thread (Column 4, Lines 26 – 29) and further wherein the content of the second information within the gaps is different from the content first information of the respective gap within which the second information is disposed (Figure 7 shows the first information as the gaps of letters "P" and "L" and Column 5, Lines 21 - 25 teaches of the printing 8 being capable of being inside the first information. However, earlier in the patent in Column 4, Lines 39 – 47 the printing 8 separate from the gaps is taught can have **any** desired color design such as patterns of a flag and this would also have a different content as the first information is just negative writing where the second is positive along with additional information. The flag pattern is a different information than the mere indicia, the printing in the gaps provides an information that is the same but a second information of the flag that is different from the first information where the second information is within the gaps of the first information. Furthermore Column 4, Lines 36 – 47 teach of the same layers and inks as in Column 5, Lines 20 – 24 and the only difference in the embodiments is the location of the printing 8 and therefore the color design can inherently be used in this embodiment), and further wherein the form of the letters, numbers or geometrical figures forming the second information is different from the form of the characters or patterns forming the first information (The physical form of the letters in the second information are different because not only is it a positive image in the first information negative image, but it is also comprised of various different lines or colored portions which shows distinct physical patterns in forming the letters, number or geometrical

figures of the second information). Furthermore, with respect to the digital printing, the structure of Burchard is capable of being digitally printed (as discussed later in the office action); even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the information and color designs representing different information in the gaps of Heim in order to provide a higher resistance to forgery (Column 4, Lines 55 – 63). Furthermore, if applicant disagrees with the anticipation nature of this disclosure, please refer to the 35 USC 103a rejection of Claims 1, 14, 15 and 22 using Burchard.

7. Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Sakamoto et al. (Sakamoto; U.S. 6,352,804).

In regards to Claims 1, 14, and 15, Burchard security element comprising a cover layer 4 having gaps 5 in the form of characters (letters) or patterns forming visually and/or machine readable first information (Column 5, Lines 9 – 15, 21 – 25; Figure 7, Items 4, 5), wherein a printed image 8 in the form of letters, numbers or geometrical figures forming visually and/or machine readable second information is disposed within the gaps in register (Column 5, Lines 21 – 25; Figure 7, Item 8 shows letters) and

furthermore wherein the security element is a security thread (Column 4, Lines 26 – 29) and further wherein the content of the second information within the gaps is different from the content first information of the respective gap within which the second information is disposed (Figure 7 shows the first information as the gaps of letters "P" and "L" and Column 5, Lines 21 - 25 teaches of the printing 8 being capable of being inside the first information. However, earlier in the patent in Column 4, Lines 39 – 47 the printing 8 separate from the gaps is taught can have **any** desired color design such as patterns of a flag and this would also have a different content as the first information is just negative writing where the second is positive along with additional information. The flag pattern is a different information than the mere indicia, the printing in the gaps provides an information that is the same but a second information of the flag that is different from the first information where the second information is within the gaps of the first information. Furthermore Column 4, Lines 36 – 47 teach of the same layers and inks as in Column 5, Lines 20 – 24 and the only difference in the embodiments is the location of the printing 8 and therefore the color design can inherently be used in this embodiment), and further wherein the form of the letters, numbers or geometrical figures forming the second information is different from the form of the characters or patterns forming the first information (The physical form of the letters in the second information are different because not only is it a positive image in the first information negative image, but it is also comprised of various different lines or colored portions which shows distinct physical patterns in forming the letters, number or geometrical figures of the second information). Furthermore, if applicant disagrees with the

anticipation nature of this disclosure, please refer to the 35 USC 103a rejection of Claims 1, 14, 15 and 22 using Burchard.

Burchard does not discloses wherein the image in the gaps is printed by digital printing or wherein the printed image is produced in the gaps by a virtual printing method selected from the group consisting of digital printing such as ink jet, thermal sublimation or thermal transfer, a temporary digital printing method such as an electrophotographic method, ionography or magnetography, in particular by a toner-based printing method such as laser printing, and a liquid-ink method such as Indigo.

Sakamoto et al. (Sakamoto; U.S. 6,352,804) teaches of providing a substrate 1 with a resin 2 which is hardened and has material removed forming gaps/image elements 4 wherein the gaps are then printed with an ink 5 by means on inkjet printing (Column 3, Lines 19 – 55; Figures 1A – 1E, Items 1, 2, 4, 5). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the gaps of Burchard with inkjet printing because such a printing provides a high accuracy of printing and control when printing the pattern (Column 3, Lines 49 – 52).

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard in view of Sakamoto and Heim.

In regards to Claim 25, Burchard modified by Sakamoto does not disclose wherein the cover layer comprises a metal layer, and the metal layer is applied by vapor deposition or by electron-beam vaporization.

Heim teaches of a security element having a cover layer D and A_2 wherein gaps 9 exist which forms characters wherein the cover layer has a dielectric layer (Paragraph 0064, Lines 1 – 6; [designates "D" as Dielectric]; Figure 8, Items D, A_2 9) provided on a substrate that is provided with a relief structure in the form of a diffraction structure that is embossed there into (Paragraph 0025, Lines 1 – 6; Figure 8, Item S) wherein the dielectric layer can be vapor deposited (Paragraph 0018, Lines 1 – 5). Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the cover layer of Burchard with the cover layer of Heim and modify the substrate and cover layer with diffraction structures as taught by Heim in order to provide the security element of Burchard with a color changing capability (Paragraph 0064, last 5 lines) which provides a further security measure.

Response to Arguments

The Examiner understands, through the amendments and remarks that the Applicant is now claiming physically different letter, numbers or geometrical figures in the second information from the first information. The claims show this as directing limitations to the "form" however the form of the first information is still considered by the Examiner to be different from the form of the second information as the display of the first information is done by creating negative indicia and the second information is not positive indicia and providing additional information not present in the first information. The second information is presented as different colors in the ink and different colors will show a different form. In order to claim an actual physical different the Examiner recommends that Applicant that the claims make a clear distinction by

saying that the letters, numbers, or geometrical figures of the first information are not represented or replicated in any way in the second information or do not provide the same interpretation of information in any way. The content is different because the negative information provides nothing about a country, however positive information within the negative information does provide country information due to the colors of the positive information. The form is different because one is negative and one is positive, one has color and one does not, one is thinner than the other, and one represents a country while the other one does not. The way in which the form of the letters, numbers, or geometrical figures is claimed does not definitively limit the physical nature of the letters, numbers, or geometrical figures.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRADEEP C. BATTULA whose telephone number is (571)272-2142. The examiner can normally be reached on Mon. - Thurs. & alternating Fri. 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on 571-272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. C. B./
Examiner, Art Unit 3725
July 22, 2009

/Dana Ross/
Supervisory Patent Examiner, Art Unit 3725